

## Message Text

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PAGE 01 STATE 020239  
ORIGIN OES-06

INFO OCT-01 AF-08 ISO-00 IO-13 COME-00 NSF-02 EUR-12 EPA-04  
CEQ-01 CIAE-00 INR-07 NSAE-00 /054 R

DRAFTED BY OES/ENP/EN:PGLASOE/NOAA:ABESTUL:EF  
APPROVED BY OES/ENP/EN:DRKING  
IO/SCT:JTREVITHICK (SUBS)

-----290003Z 098895 /14

P 282202Z JAN 77  
FM SECSTATE WASHDC  
TO AMEMBASSY NAIROBI PRIORITY

UNCLAS STATE 020239

FOR BASTIAN

E.O. 11652: NA

TAGS: SENV, KE, US

SUBJECT: UNEP OZONE MEETING

REF: NAIROBI 1052

1. THE FOLLOWING IS THE MOST UP-TO-DATE LISTING OF U.S.-  
IDENTIFIED "INVESTIGATIONAL GAPS" IN THE AREA OF STRATO-  
SPHERIC PHOTOCHEMISTRY AND DYNAMICS. THIS LIST IS,  
OF COURSE, SUBJECT TO FURTHER REVISION AS WE CONTINUE TO  
DEVELOP OUR POSITION FOR THE MEETING. WE HOPE TO CABLE  
YOU SIMILAR LISTS FOR AT LEAST SOME OF THE OTHER SUBJECT  
AREAS (CLIMATE HUMAN EFFECTS, ETC.) NEXT WEEK.

2. THE GAPS ARE LISTED IN DESCENDING ORDER OF RELATIVE  
PRIORITY. ADDITIONALLY A-M ARE OF GENERAL HIGH  
PRIORITY IN REGARD TO ALL FIVE SUBJECT AREAS.

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PAGE 02 STATE 020239

A. GLOBALLY MONITOR OZONE AND ITS VERTICAL DISTRIBUTION  
ABOVE 25 KM BY SATELLITE TO STUDY ITS VARIABILITY AND FOR  
EARLY DETECTION OF TREND CHANGES.

B. UPGRADE THE DOBSON SPECTROPHOTOMETER NETWORK TO PROVIDE  
TOTAL COLUMN OZONE CLIMATOLOGY WITH IMPROVED ACCURACY TO  
3-5 PERCENT AND TO PROVIDE GROUND TRUTH FOR SATELLITE

MEASUREMENT SYSTEMS.

C. UNDERTAKE SOPHISTICATED TIME SERIES ANALYSIS OF RESULTS FROM ALL OZONE STATIONS HAVING 10 OR MORE YEARS OF RECORD TO EVALUATE TREND CHANGES.

D. OBTAIN SIMULTANEOUS STRATOSPHERIC MEASUREMENTS OF ONE OR MORE RADICALS IN EACH OF THE H, N, AND CL SYSTEMS, ESPECIALLY HOX, WHICH IS A MAJOR SOURCE OF UNCERTAINTY.

E. DETERMINE SIMULTANEOUSLY THE SOURCE AND SINK TERMS IN THE H, N, ESPECIALLY FOR HCL AND C10 AND THEIR COUPLINGS.

F. DEVELOP BETTER MEASUREMENTS TO STUDY SMALL-SCALE DYNAMICS INCLUDING TROPOSPHERIC-STRATOSPHERIC EXCHANGES.

G. OBTAIN ACCURATE TEMPERATURE DEPENDENT RATE DATA FOR THE CHEMICAL REACTIONS OF H0, H02, CL, AND CH4, AND PRES-SURE DEPENDENT DATA FOR CLON02.

H. DETERMINE SPECTRAL ABSORPTION CROSS SECTIONS AND PRO-DUCT QUANTUM YIELDS FOR HN02, HN03, N20, N03, O3, AND CH2O.

I. DETERMINE PHASE EQUILIBRIA FOR H2SO4, HNO3, H2O MIXTURES

J. MEASURE THE CO PROFILES TO INDIRECTLY CORROBORATE OH UNCLASSIFIED

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PAGE 03 STATE 020239

MEASUREMENTS.

K. DEVELOP IMPROVED MEASUREMENTS TO UNDERSTAND THE STRUCTURE OF OZONE RELATED TRACE CONSTITUENTS IN THE STRATOSPHERE.

L. UNDERTAKE TRACER STUDIES TO BETTER DESCRIBE LARGE-SCALE STRATOSPHERIC DIFFUSION, ESPECIALLY IN THE VERTICAL.

M. DEVELOP BETTER COMPREHENSIVE AND SPECIALIZED MODELS OF STRATOSPHERIC TRANSPORT.

N. MEASURE THE O CONCENTRATION AND MONITOR THE SPECTRAL DISTRIBUTION OF SOLAR RADIATION EXTRATERRESTRIALLY AND IN THE MESOSPHERE AND UPPER STRATOSPHERE TO BETTER UNDER- STAND THE FORMATION OF OZONE.

O. MONITOR STRATOSPHERIC WATER VAPOR.

P. DETERMINE THE TEMPERATURE PROFILES IN THE STRATOSPHERE BY OBSERVATION OF CO2 EMISSIONS FROM SATELLITES.

Q. OBTAIN MORE OBSERVATIONS OF STRATOSPHERIC DYNAMIC PROCESSES SUCH AS "WARMINGS."

R. INCORPORATION OF MAJOR PHOTOCHEMICAL REACTIONS ON 3-D MODELS.

S. INVESTIGATION OF IMPROVED PARAMETERIZATION FOR MULTI-DIMENSIONAL MODELS TO IMPROVE COMPUTER RUNNING TIMES.

T. INVESTIGATION OF EFFECTS OF CHEMICAL AND DYNAMICAL FEEDBACK IN 1-, 2-, AND 3-D MODELS.  
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## Message Attributes

**Automatic Decaptioning:** X  
**Capture Date:** 01-Jan-1994 12:00:00 am  
**Channel Indicators:** n/a  
**Current Classification:** UNCLASSIFIED  
**Concepts:** ATMOSPHERE, OZONE, SCIENTIFIC MEETINGS  
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**Copy:** SINGLE  
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**Decaption Date:** 01-Jan-1960 12:00:00 am  
**Decaption Note:**  
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**Disposition Approved on Date:**  
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**Enclosure:** n/a  
**Executive Order:** N/A  
**Errors:** N/A  
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**Original Classification:** UNCLASSIFIED  
**Original Handling Restrictions:** n/a  
**Original Previous Classification:** n/a  
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**Reference:** 77 NAIROBI 1052  
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**Review Exemptions:** n/a  
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**SAS ID:** 3639064  
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**Subject:** UNEP OZONE MEETING  
**TAGS:** SENV, KE, US, UNEP  
**To:** NAIROBI  
**Type:** TE  
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**Review Markings:**  
Margaret P. Grafeld  
Declassified/Released  
US Department of State  
EO Systematic Review  
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